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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,943	12/21/2001	Valery Leblond	217601US2	7696

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EXAMINER

TSE, YOUNG TOI

ART UNIT PAPER NUMBER

2637

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,943

Applicant(s)

LEBLOND ET AL.

Examiner

YOUNG T. TSE

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) 6, 11 and 12 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5 and 7-10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12212001.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. See page 2, line 1 of the specification.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. Further, Figure 2 should be deleted from the abstract.

Claim Objections

5. Claims 6 and 11-12 are objected to under 37 CFR 1.75(c) as being in improper form because multiple dependent claims 5 and 10. See MPEP § 608.01(n).

Accordingly, the claims 5 and 11-12 have not been further treated on the merits.

6. Claims 1-5 and 7-10 are objected to because of the following informalities:

In claim 1, line 9, "the bands K" should be "the frequency bands K".

The dependent claim 2 is depended upon claim 1.

In claim 3, lines 1 and 4, “the interferences” and “the signals” should be “interferences” and “signals”.

The dependent claims 4 and 5 are depended upon claim 3.

In claim 7, line 2, “means adapted to subdividing” should be “means for subdividing”; line 5, “frequency band index” should be “a frequency band index”; and line 7, “the bands” should be “the frequency bands”.

The dependent claim 8 is depended upon claim 7.

In claim 9, line 5, “each digitized signal x_i , into” should be “each sample signal x_i , into the” and line 8, “by power” should be “by the power”.

In claim 10, line 2, “into K” should be “into the K”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-5 and 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 (lines 7 and 8), claim 3 (lines 11 and 12) and claim 7 (lines 5 and 6), it is unclear what is meant by “ $w_{ik} \cdot x_{ik}$ ”?

In claim 1 (line 7), claim 2 (line 2), claim 3 (lines 7, 8 and 11), claim 4 (line 1), claim 5 (lines 1 and 2), claim 7 (line 5), and claim 9 (lines 2, 3, 4 and 10-11), the

phrases "the different weighted coefficients", "the CRPA type", "the xik samples", "the weighting coefficients", "the subdivision step", "the dynamic range", "the coefficients", "the computation unit", "the frequency transportation", "the frequency", "the initial signal", and "the different samples" all lack antecedent basis.

In claims 1 and 2, "CRPA" is undefined.

Claim 7 recites at least one set of means and claim 9 recites the detailed claimed elements, however, it is unclear what are the relationship among the at least one set of means and the claimed elements between claim 7 and claim 9. Further, the Applicants are requested to use uniform terms in the claims, especially claim 9 in order to distinguish the differences with other terms.

The dependent claim 10 is depended upon claim 7 or 9.

9. Regarding claim 2, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Allowable Subject Matter

10. Claims 1-5 and 7-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

11. Claims 3-5 and 7-10 would be allowable if rewritten or amended to overcome the objection(s) set forth in this Office action.

12. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to show or suggest a method or apparatus to eliminate

interference for combining different weighted coefficients $w_{ik} \cdot x_{ik}$ by a given frequency band index k in order to obtain signals s_k corresponding to the summation of the different weighted coefficients $w_{ik} \cdot x_{ik}$ of subdivided samples in K frequency bands derived from each sample signal and then carrying out the combination of the signals s_k for the totally or the mostly free interference of the frequency band K .

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Van De Kerkhof et al. is related to an audio signal processing arrangement for splitting left and right channel signal to a plurality of filters.

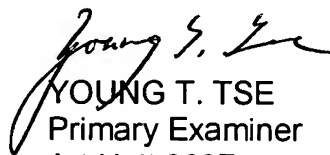
Yoshida et al. is related to a DS/CDMA receiver comprising a plurality of adaptive interference cancellers and control circuits for controlling interference signals of a received signal.

Vandendorpe et al. is related to a multiband detector used to generate a plurality of subband symbols from a distorted multiband signal performed by a plurality of FIR digital filters arranged in a single-input-multiple-output architecture.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday-Thursday and alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The Central FAX Number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


YOUNG T. TSE
Primary Examiner
Art Unit 2637